

REMARKS

Claims 1, 4, 5, 8, and 13-14 are pending in the present application. Claims 10-12 have been canceled. Claims 13 and 14 have been added. The Examiner is respectfully requested to withdraw the rejections in view of the amendments and the following remarks.

I. REJECTIONS UNDER 35 U.S.C. §103

Claims 1, 4, 5, 8, 11, and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hara Chie et al. (JP 08-281856; "Chie") in view of Kubo Koichi et al. (JP 06-043310; "Koichi"). Applicant respectfully traverses this rejection for at least the reasons set forth below. At the outset, Applicant notes that Claims 11-12 have been cancelled thereby rendering the § 103(a) rejection against Claims 11-12 moot.

A. Independent Claim 1

Amended independent Claim 1 recites a transparent coordinate input device that includes:

a first transparent base material having a first transparent resistance film disposed on a face thereof; and

a second transparent base material facing said first transparent base material with a clearance therebetween and having a second transparent resistance film disposed on a face thereof opposing said first transparent resistance film;

wherein the first transparent base material is disposed below the second transparent base material, and a plurality of ridge portions are formed only on a surface of the first transparent base material which faces the second transparent base material, wherein the ridge portions are transparent, have a polygonal shape in section, are narrow in width, and are projected strips longitudinally extending in one direction, the ridge portions adjacent to each other are formed with a predetermined pitch and formed by continuously extending the ridge portions, and a pitch of the ridge portions is between 100 μm and 500 μm , inclusive and wherein the polygonal shape of the ridge portions comprises one of a triangular shape or a triangular shape with a curved top wherein a vertical angle of the triangular shape or the triangular shape with the curved top in the section of the ridge portion is an obtuse angle,

wherein a lower face of the second transparent base material disposed on an operation side and a lower face of the second transparent resistance film are smooth

surfaces and wherein the second base material and the second transparent resistance film are configured to flex toward the first transparent base material based on input received during operation, and

wherein a surface of the first transparent resistance film formed on an upper face of the ridge portions is formed along the projected strips longitudinally extending in the one direction of the ridge portions and has an obtuse vertical angle in each section of the ridge portions.

Emphasis added. The proposed combination of Chie and Koichi does not teach at least the underlined features.

Applicant respectfully submits that the combination of Chie and Koichi fails to teach or suggest the configuration of the transparent coordinate input device as presently claimed. The Examiner asserts that element 1 and element 3 depicted in Figure 3 of Chie teach the recited second transparent base material and the second transparent resistance film, respectively. Applicant respectfully disagrees.

Chie is directed towards a touch panel in which a lower surface of a transparent substrate 1 of an upper base material is uniformly roughened and in which an upper transparent electrode 3 is formed on the lower surface and an upper surface of a transparent substrate 1b of a lower base material and an upper surface of a lower transparent electrode 3b are formed in a planar fashion as depicted in Figure 3 and described at paragraphs 0014, 0015, and 0017-0021. Koichi is directed towards a transparent prism film 106 or sheet 106 (i.e., a light reflecting panel) for arranging a surface of a rugged strip having a triangular cross-section as shown in Figure 10 in order to be in contact with a surface of a light source 103 of a surface light source device depicted in Figures 10-12 and described at paragraphs 0010 and 0012. However, the combination of Chie and Koichi references fails “wherein the second base material and the second transparent resistance film are configured to flex toward the first transparent base material based on input received during operation” as presently recited in Claim 1. As illustrated in Figure 5 of the

present application, when the second transparent base material 34 on the operation surface side (i.e., the upper side) of the touch panel is provided with input (i.e., pressed down), the second transparent base material 34 is easily deformed in an in-plane contact manner to securely detect coordinates. However, in the configuration in which the transparent substrate 1 of Chie is modified with the transparent prism film 106 having a rugged strip of Koichi, an in-plane anisotropy occurs within the rigidity of the transparent substrate 1 of the upper base material thereby making it difficult to deform in a direction perpendicular to a longitudinal direction of the rugged strip even if the transparent substrate 1 of the upper base material is pressed thereby making it difficult to detect coordinates. In other words, the modification of Chie with Koichi fails to teach or suggest a transparent coordinate input device having a second base material and the second transparent resistance film “configured to flex toward the first transparent base material based on input received during operation” as presently claimed.

In further support of Applicant’s interpretation, Applicant directs the Examiner attention towards the excellent durability necessarily demonstrated by the recited second transparent base material and the recited second transparent resistance film. In contrast, in the modified configuration of Chie with Koichi utilized by the Examiner, when the transparent substrate 1 of the upper base material and the upper transparent electrode 3 are repeatedly pressed, cracks will be experienced due to the lack of durability of the respective components of the modified configuration.

As noted above, Claim 1 has been further amended to recite “wherein the polygonal shape of the ridge portions comprises one of a triangular shape or a triangular shape with a curved top wherein a vertical angle of the triangular shape or the triangular shape with the curved top in the section of the ridge portion is an obtuse angle” and “wherein a surface of the first transparent

resistance film formed on an upper face of the ridge portions is formed along the projected strips longitudinally extending in the one direction of the ridge portions and has an obtuse vertical angle in each section of the ridge portions.” In other words, the present invention ensures that a Newton ring is securely prevented from being generated when the recited second transparent base material receives input (i.e., when the second transparent base material is pressed) making it possible to realize a precise coordinate detection. In contrast, in the touch panel disclosed in Chie cannot exhibit the operation effect described above since the upper surface of the transparent base 1b of the lower base material and the upper surface of the lower transparent electrode 3b are formed planarly.

Additionally, by utilizing a configuration in which a vertical angle in each section of the ridge portions is an obtuse angle and the surface of the recited first transparent resistance film formed on the upper face of the ridge portions is formed to have an obtuse vertical and currently claimed, the present invention provides for the suppression of glittering due to the lens effect caused when light from a liquid crystal display panel passed through the ridge portion unlike the combination of Chie and Koichi. As described in paragraph 0044 of Koichi, a vertical angle of a convex portion of the transparent prism film 106 is 90 degrees. As such, if the vertical angle of the convex portion were acute in Koichi, glittering due to the lens effect caused when light from a liquid crystal display panel passes through the convex portion would be immense. (See Figure 12 and Paragraphs 0011, 0046 of Koichi).

Furthermore, by having the configuration in which a vertical angle in each section of the ridge portions is an obtuse angle and the surface of the first transparent resistance film formed on the upper face of the ridge portions is formed to have an obtuse vertical angle as presently claimed, the present invention relieves the concentration of a pressing force when the recited

second transparent resistance film on the operation surface side comes in contact with the recited first transparent resistance film on a fixed side at a time of operation. In contrast, as mentioned above, in paragraph 0044 of Koichi, a vertical angle of a convex portion of the transparent prism film 106 is 90 degrees. As such, if the vertical angle of the convex portion were acute in Koichi, the pressing force experienced in Koichi would be concentrated on the upper transparent electrode 3 resulting in substantial damage after being repeatedly pressed.

For at least the reasons cited, Applicant respectfully submit that independent Claim 1 is allowable over the combination of Chie and Koichi. As such, Applicant respectfully requests withdrawal of this rejection of independent Claim 1 and its dependent claims.

II. CONCLUSION

Based on the above remarks, Applicant respectfully submits that the claims are in condition for allowance. The Examiner is kindly invited to contact the undersigned attorney to expedite allowance.

Respectfully submitted,

/Gustavo Siller, Jr./

Gustavo Siller, Jr.
Registration No. 32,305
Attorney for Applicant

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200